Swiss research center invites Tec graduate to collaborate

Facial recognition using **artificial intelligence** is a topic of growing impact in many industries, according to **Luis Santiago Luévano**, a PhD student at **Tec de Monterrey's State of Mexico campus**.

*"My research focuses on developing **computer vision** using **artificial intelligence**.*

*"It's a very important **new area** of knowledge which is exploiting **various applications** within the industry,"* he said.

Luis holds a bachelor's degree in **Computer Systems Engineering** from the **State of Mexico campus**, a **master's degree** from the **Stevens Institute of Technology** in the United States, and this year will complete his **PhD in Computer Science** at the Tec.

Luis Santiago, doctorando, Tec CEM width="900" loading="lazy">

Facial recognition

Luis' **research work** seeks to **streamline facial recognition processes.**

*"There are laboratories in **China, England, and the United States** which are working with high- and low-resolution databases for **facial recognition** with face masks because of the pandemic. Their focus is on **accuracy** and which methods are the best.*

*"But we focused on improving **efficiency, without neglecting precision.** We want to use **neural networks** which run on more limited hardware to **lower costs**,"* he explained.

Luis also points out that some traditional methods require a **full computer** with a high-quality graphics card which therefore means it is **more expensive** to run applications in real time.

*"**Our goal is to make it more affordable.** For example, our platform might cost you around **4,000 pesos** to run the application for **2 or 3 security cameras** in a store **in real time**,"* he explained.

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Knowledge for everyone

Luis mentions that the **applications** which use **technology** like the kind he is developing are very broad.

*"These include **autonomous cars, object recognition** using mobile devices, **image and color segmentation**, and many more applications.*

*"It's an area that is **growing around the world** and there's a lot of attention from large companies such as **Google, Facebook**, and others,"* he said.

Luis has collaborated with Tec professors such as Dr. **Miguel González**, **Leonardo Chang, and Gilberto Ochoa** on his research. Together with the **Advanced Technologies Application Center** in Cuba, they have published **5 articles**.

*"Our intention is to **release the code repository** used in my research to the public. We aren't interested in commercialization, but rather in the **democratization of knowledge**",* he stressed.

*"**The foundation of science is transparency and continued collaboration in order to share knowledge." - Luis Luévano***

Mexico and computer vision

Throughout his academic career, Luis has met Mexican **colleagues working in other countries**. However, he believes that **support for research** is lacking in Mexico.

*"If you compare the **number of Mexicans** working on this type of research with the number of Chinese, Japanese, Americans, or Koreans, **we are a very small proportion.***

*"Computer vision **research is very limited in Mexico.** There are just a few of us. We need scientific training, which would **benefit both industry and academia**,"* he pointed out.

From **September to December** of this year, Luis will **continue part of his research in Switzerland,** as he has been invited there by the **IDIAP Research Institute**

Luis Santiago, doctorando, Tec CEM width="900" loading="lazy">

Art and science

Luis has used his time at Tec de Monterrey to not only focus on the academic side, but also on the **arts**. In 2020, he received the '**Best Participant**' **award** from the Department of **Art and Culture** at the **State of Mexico campus**.

*"**Music is another passion** of mine. I play guitar and bass, and I was part of the Tec's **company of musicians**,"* he said.

The PhD student considers this **approach** to be **fundamental** for any type of project.

*"The most **important thing is to be focused** on a subject, and sometimes that's difficult because there are lots of **distractions**.*

*"I recommend looking for an area in which you **can develop** and find out what there is to work on. In my case, I plan to **dedicate myself to academia**. We need to **promote research in Mexico**,"* he concluded.

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